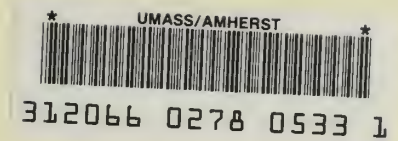


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NORTHERN WORCESTER  
SERVICE DELIVERY AREA  
(Includes Fitchburg and Gardner)  
Industry and Occupational Analysis

COMMONWEALTH OF MASSACHUSETTS

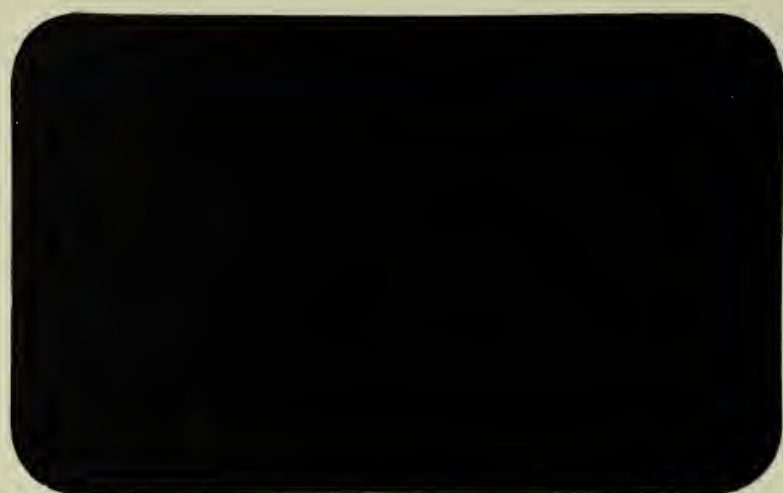
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# Division of Employment Security

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NORTHERN WORCESTER  
SERVICE DELIVERY AREA  
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Industry and Occupational Analysis

Research and Policy Department  
June 1984



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I. Introduction

The Northern Worcester SDA consists of 23 cities and towns in Worcester County including Fitchburg, Leominster, Gardner and Clinton. In April 1984, the unemployment rate for the SDA of 5.4 percent was dramatically lower than the 8.2 percent rate registered a year earlier. This trend is similar to the one occurring in the Southern Worcester SDA which has seen its unemployment fall from 8.7 percent to 5.0 percent during the same period. The April unemployment rate for the Northern Worcester SDA was just 0.4 percent above the State rate of 5.0 percent. In fact, the monthly unemployment rate in the SDA has not been this close to the statewide average for nearly 3 years. Furthermore, the unemployment rate in Northern Worcester stood well below the April National rate of 7.6 percent.

The sharp improvement in unemployment conditions within the SDA reflects a major recovery from the most recent recession. Between 1981 and 1983, unemployment in the Northern Worcester SDA, increased from 6.6 percent to 8.4 percent. In addition, during the depths of the recession in 1982, the unemployment rate peaked at 12.9 percent in July and averaged 9.7 percent for the entire year. It is anticipated that the current recovery will be strong enough to produce a 1984 annual unemployment rate in Northern Worcester that will be the lowest in three years.



## II. Industry Analysis

The list of growth industries presented in this report was obtained by selecting those industries that exceeded the overall employment growth rate in the Northern Worcester SDA between the third quarters of 1982 and 1983 (82 III and 83 III). During this period, the initial stages of recovery from the most recent economic downturn were reflected by a net addition in employment of over 1,100 jobs or 2.0 percent. However, it should be mentioned that the total employment figure of 58,200 was still approximately 1,200 jobs below the 1981 third quarter level. Thus, the recovery which began in early 1983 within the Northern Worcester SDS still has some distance to travel before the local economy reaches its pre-recession employment peak. Local officials, economic policymakers, and educational planners must carefully monitor more current data, as it becomes available, in order to assess the magnitude and distribution of future employment growth.

The fourteen growth industries which have been indentified for the Northern Worcester SDA are indicative of a diverse industrial base. Specific industries in construction, nondurable goods manufacturing, wholesale trade, retail trade, banking and services all exceeded the rate of total employment growth in the SDA. It should be noted that two important industries, hospitals, and office and computing machines, were included even though they fell a bit short of the 2.0 percent growth rate registered throughout the SDA. It was determined that since these two industries accounted for 10 percent of total employment and did experience some employment growth they were likely to be an important source of job opportunities for training program graduates. Within hospitals, however, the adverse impact of Chapter 372, the new health cost containment legislation, could impeded job growth among area health providers. Vocational education planners will need to stay in contact with area hospitals in order to assess the ongoing effects of Chapter 372.

Another important phenomenon pertaining to recent employment trends was the fact that not one durable goods manufacturing industry exceeded the rate of overall employment growth. Traditionally, this sector has lagged in recovering from economic downturns, as employers typically expand the hours worked before recalling those laid off and making new hires. However, when recovery does occur, durable goods industries may be a potential source of employment for vocational education graduates. Conversely, if the structural problems, which have plagued many durable goods industries, such as metal machinery, fabricated metals, and furniture manufacturers continue, then even a strong recovery may not be sufficient in restoring vitality to area employers operating in these sectors. Once again, economic policy makers and planners will have to pay close attention to present and future employment developments in these important industries.



The construction sector, both general building and special trade contractors, fared quite well during the 82 III to 83 III period and actually expanded well beyond its 81 III level. Miscellaneous plastic products, the largest area manufacturing industry with nearly 5,700 employees returned to its pre-recession level, expanding by 200 jobs.

Retail trade included five growth industries; building materials and hardware; department stores; grocery stores; drug stores; and eating and drinking places. The employment performance of eating and drinking places has been especially impressive, as the number of jobs expanded by almost 400, or 12 percent, between 82 III and 83 III. The remaining growth industries consisted of wholesale machinery equipment and supplies, mutual savings banks, and nursing and personal care facilities.



### III. Occupational Analysis

The list of growth occupations presented in this report was obtained by examining the occupational structure of all growth industries and comparing those identified with employment projections. Any occupation which accounted for a significant share of industry employment (at least 2.0 percent) in the area and which was projected to grow by at least 12.0 percent during the 1980's (the statewide average) were included. Because the primary audience for this occupational analysis is vocational education and Job Training and Partnership Act planners and administrators, occupations which clearly require at least a bachelor's degree for entry (e.g. physicians, engineers, etc.) were not included. It should also be emphasized that the analysis was strictly demand oriented. An awareness of how existing sources of labor supply in the area, i.e., public and private post-secondary institutions, in house training, QJT's, etc., are responding to local labor market conditions is essential, if JTPA and vocational education planners are to make appropriate decisions regarding the allocation of training resources.

An examination of the fifteen growth occupations reveals that, with the exception of sales representatives, and to a lesser extent cashiers and assemblers, most appear to be very industry specific. For example, restaurant managers, cooks, waiters and waitresses, and food preparation workers are tied almost exclusively to the strong performance of eating and drinking places in the SDA. It should also be noted that each of these four occupations is expected to grow well above the statewide average of 12.0 percent during the 1980's.

The three dominant health occupations are nurse aides, licensed practical nurses (LPN), and registered nurses (RN). As noted earlier, the employment impact of Chapter 372 has yet to be determined. Because hospitals tend to use a large proportion of RN's, any adverse effects of Chapter 372 are likely to be more pronounced upon RN's.

The three craft occupations, carpenters, painters, and electricians, were selected because of the strong performance of the construction sector. While carpenters represent a significant employment share in general building construction, electricians and painters are found primarily among special trade contractors.

The two remaining occupations, bank tellers and plastic extruding operators, are also quite industry specific. In fact, tellers represent nearly 40 percent of the 400 jobs in mutual savings banks. Extruder operators are found primarily among manufacturers of miscellaneous plastic products, and account for 300 jobs, or 6 percent of total industry employment. A description of key characteristics of each growth occupation follows:



Carpenters work with wood and other building materials, such as plastic and fiberglass, to do construction and repair. A large proportion of carpenters acquire their skills through informal means, such as working as a carpenter's helper. Ideally, people who plan to work as carpenters should complete a formal apprenticeship program which usually consists of four years of on-the-job training. Over 40 percent of carpenters are employed in residential building construction, non-residential building construction, or special trade contracting, while nearly 30 percent of carpenters are self-employed. Statewide projections indicate a faster than average growth rate for carpenters as a result of the construction of new structures and alteration and maintenance of old ones. While the long-term employment outlook is good, the number of job openings may fluctuate from year to year as the economy expands and contracts.

Painters apply various coating substances to interior and exterior walls and surfaces for decoration or building protection. They learn their skills through on-the-job instruction or through a formal apprenticeship which may last up to three years. An apprenticeship is the optimal form of training. Employment of painters will grow at an average rate, although the availability of jobs may vary from year to year depending upon economic conditions. Painters working on industrial or commercial construction projects or in maintenance should experience more job stability than those in residential construction.

Electricians usually work in either construction or maintenance. Although some electricians gain their experience through on-the-job training, either as helpers of electricians or in the Armed Forces, employers prefer applicants who have completed a formal four-year apprenticeship program. Electricians must be licensed to practice in Massachusetts. Employment of electricians in Massachusetts is expected to grow 50 percent faster than the average for all occupations, as more electricians will be needed to install electrical fixtures and wiring in new and renovated buildings and to maintain electrical systems used by industry. Approximately 40 percent of electricians are employed in special trade electrical contracting, and about 15 percent are self-employed. Another 10 percent work in government and three percent are employed in ship and boat building and repairing. Construction electricians can expect more fluctuation in employment than maintenance electricians because of the cyclical nature of the construction industry.

Assemblers put together parts of manufactured items. They usually work on items that move past their work stations automatically on conveyors. Although some assemblers perform a single task, others are responsible for completing several related tasks or for making and testing an entire product. Almost all assembling skills are learned on the job, but some positions have special requirements, such as an ability to distinguish colors or above average manual dexterity. Not only is employment of assemblers expected to show above average growth, but the large size of this occupation and high replacement demands due to job turnover, will generate many openings each year. Assembler positions, however, are very dependent upon business conditions and they are among the first affected during periods of economic decline.



Extruding Machine Operators, Plastics set up and operate a machine which forces plastic materials through a die (mold) to form tubes, rods, insulating sheaths, and films. Training is provided on the job. Many operator positions open up as a result of job turnover, but like assembler positions, the availability of openings tends to vary with economic conditions.

Sales Representative (technical and non-technical) are responsible for presenting manufacturers' products to buyers in the market. They must be familiar with both the product line and their customers' needs. Sales representatives sell to wholesalers, retailers, government agencies, original equipment manufacturers, hospitals and schools. Technical sales representatives deal with complex products, such as advanced electronic machinery or industrial equipment and supplies. Sales ability and good communication skills are the most important qualities employers look for when hiring representatives, although they prefer individuals trained in a relevant technical field for presenting technically complex products. Although projected to grow at an average pace, most opportunities for sales representatives will arise from the need to replace individuals who find themselves ill suited to the competitive demands of selling.

Cashiers are responsible for handling the money that comes into an enterprise. In supermarkets and large department stores cashiers spend long periods standing at checkout counters processing customer purchases of store items. Employment of cashiers is expected to grow at a slightly above average rate. The widespread use of automated checkout systems such as those in supermarkets may slow growth, but many more jobs will be created as a result of high job turnover. Nearly half of all cashiers are employed in grocery stores with another 20 percent employed among department stores, drug stores, and eating and drinking places.

Restaurant Managers plan, organize, and direct the food service and business operations of their establishments. The larger the restaurant the less involved the manager is likely to be in day-to-day activities. But in smaller concerns, the manager may also do some of the cooking, greet and serve customers, and take an active part in handling accounts and keeping the books. Employment of restaurant managers is expected to grow at a faster than average rate. Opportunities will be best for those with relevant business or management training. Large restaurants and hotels have the most demanding hiring requirements and often seek only/experienced personnel for their management positions.

Cooks are in charge of food preparation, though their specific duties vary depending upon the size of the establishment. The demand for cooks and chefs will rise as people dine out more often. Areas exhibiting growing population will likewise generate increased opportunities. Persons who have had courses in food preparation will have an advantage in competing for the more lucrative jobs in large restaurants.



Waiters and Waitresses take customer orders, serve food and beverages, make out checks and take payments. The occupation will generate 11,000 new jobs in Massachusetts during the 80's the third highest. People dining out more and opportunities for part-time work should contribute to rising employment levels. Many more positions will become available because of the high turnover nature of the position.

Fast Food Preparation Workers are employed in restaurants where menus are generally limited to a few primary items. Employment in this occupation will grow at a nearly 50 percent rate between 1980 and 1990. These occupations have very high turnover rates and offer many part-time openings. With changing demographics leading to a sharp drop in the number of teenaged youth, job openings could be quite high.

Bank Tellers carry out transactions between a bank and its customers. Employment will rise at a rate slightly higher than the average, with the relatively high replacement needs of this occupation providing additional job opportunities. Trends toward automatic banking services will limit overall growth, but the personal contact aspect of the position as well as expansion of duties should stabilize demand.

Licensed Practical Nurses (LPN's) work under the supervision of physicians and registered nurses to help care for the physically or mentally ill. They train in programs which generally last one year and which include both classroom study and clinical practice. Employment of LPN's is projected to grow at over 20 percent as the demand for health care continues to grow rapidly. There will be a need for practical nurses to care for the growing elderly population, to provide additional health care that results from expansion in public and private health insurance plans, and for private duty nursing. Approximately 60 percent of LPN's work in hospitals and 23 percent in nursing and personal care facilities.

Nurse Aides work under the direction of physicians and nurses caring for sick and injured patients. The increasing demand for health care of a longer living population should accentuate long term demand. Approximately half of all nurse's aides work in nursing homes and other long-term care facilities. Another one-third of nurse aide positions occur in hospitals. Employment is expected to grow by nearly 20 percent but many additional positions will become available due to high job turnover.

Registered Nurses (RN's) perform a wide variety of health care functions. While programs for registered nurses vary in length from two to five years, the best opportunities will be for those holding bachelor's degrees. Employment of registered nurses is projected to grow by 30 percent as demand will be accentuated by the growing need for specialized nursing skills in emergency and operating room procedures, and to provide services for our rapidly increasing number of elderly people. Despite the recent trends toward cost containment, RN's will still be needed because of the complexity of hospital based medical procedures and equipment, and because of the rapid growth of clinics, emergency centers, and other health care facilities. Nearly two out of every three registered nurses are employed in hospitals.



NORTHERN WORCESTER SDA  
Table One

Growth Industries

General Building Contractors

Special Trade Contractors (including Painting, Electrical Work, Masonry and Stonework)

Miscellaneous Plastics Products

Toys and Sporting Goods

Wholesale- Machinery Equipment and Supplies

Retail- Building Materials and Hardware

Department Stores

Grocery Stores

Eating and Drinking Places

Drug Store

Mutual Savings Bank

Nursing and Personal Care Facilities

Hospitals\*

Office and Computing Machines\*

\*Grew at slightly less than total employment

GROWTH OCCUPATIONS

Carpenters

Cooks

Painters

Waiters and Waitresses

Electricians

Fast Food Preparation Workers

Assemblers

Bank Tellers

Extruding Machine Operators, Plastics

Licensed Practical Nurses

Sales Representatives

Nurse Aides

Cashiers

Registered Nurses

Restaurant Managers



TABLE #  
UNEMPLOYMENT RATES FOR THE  
NORTHERN WORCESTER  
SERVICE DELIVERY AREA,  
MASSACHUSETTS, and UNITED STATES

PERIOD	SDA	MASSACHUSETTS	UNITED STATES
1981 Annual Average	6.6	6.4	7.6
1982 Annual Average	9.7	7.9	9.7
1983 Annual Average	8.4	6.9	9.6
<u>1982</u>			
JANUARY	8.8	8.0	9.4
FEBRUARY	9.1	8.3	9.6
MARCH	8.8	7.6	9.5
APRIL	9.8	8.0	9.2
MAY	10.4	8.6	9.1
JUNE	10.9	9.0	9.8
JULY	12.9	9.6	9.8
AUGUST	9.5	7.6	9.6
SEPTEMBER	9.3	7.4	9.7
OCTOBER	9.3	7.2	9.9
NOVEMBER	8.1	6.5	10.4
DECEMBER	9.2	7.1	10.5
<u>1983</u>			
JANUARY	10.9	8.7	11.4
FEBRUARY	10.2	8.2	11.3
MARCH	9.8	8.0	10.8
APRIL	8.2	6.7	10.0
MAY	8.2	6.5	9.8
JUNE	9.1	7.5	10.2
JULY	8.0	6.2	9.4
AUGUST	7.2	6.0	9.2
SEPTEMBER	8.3	7.0	8.8
OCTOBER	7.6	6.4	8.4
NOVEMBER	6.5	5.6	8.1
DECEMBER	7.0	5.8	8.0
<u>1984</u>			
JANUARY	8.3	7.3	8.8
FEBRUARY	7.0	6.3	8.4
MARCH	6.3	5.8	8.1
APRIL	5.4	5.0	7.6

SOURCE: Local Area Unemployment Statistics Program  
Figures not adjusted for seasonality.





